

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property  
Organization  
International Bureau



541597



(43) International Publication Date  
5 August 2004 (05.08.2004)

PCT

(10) International Publication Number  
WO 2004/065431 A1

(51) International Patent Classification<sup>7</sup>: C08F 10/02, 4/00

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(21) International Application Number:

PCT/KR2004/000068

(22) International Filing Date: 16 January 2004 (16.01.2004)

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(25) Filing Language:

Korean

(26) Publication Language:

English

(30) Priority Data:

10-2003-0004522 23 January 2003 (23.01.2003) KR

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

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Published:

— with international search report

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.



WO 2004/065431 A1

(54) Title: METHOD OF POLYMERIZATION AND COPOLYMERIZATION OF ETHYLENE

(57) Abstract: Disclosed is a method of polymerization and copolymerization of ethylene, which is carried out in the presence of (a) a solid titanium complex catalyst prepared by the steps of (i) preparing a magnesium solution by contacting halogenated magnesium compounds with alcohol, (ii) reacting the magnesium solution with ester compound having at least one hydroxyl group and silicon compound having alkoxy group, (iii) preparing a solid titanium catalyst component by reacting mixture of titanium compound and haloalkane compound; and (iv) producing solid titanium complex catalyst by reacting the solid titanium catalyst component with mixture of aluminum compound and haloalkane compound, or haloalkane; and (b) organometallic compounds in Group II or III of the Periodic Table.